Montana Department of ENVIRONMENTAL QUALITY

WATER PROTECTION BUREAU

Agency Use	
Permit No.:	
Date Rec'd	2/3/09
Amount Rec'd	0.00
Check No.	
Rec'd By	CB

FORM
NMP

Nutrient Management Plan

READ THIS BEFORE COMPLETING FORM: Before completing this form (Form NMP), Concentrated Animal Feeding Operation (CAFO) operators need to read the General Permit, particularly Part IV.A. CAFO operators also need to read the "Instructions For Filling Out Form NMP," found at the back of the Form. Form NMP is intended to help CAFO operators develop a site-specific Nutrient Management Plan, in compliance with Part IV.A of the General Permit and all applicable State rules and statutes. Your Nutrient Management Plan must be maintained at the site as required in Part III of the General Permit. Sections B and C on your Form NMP must state the information exactly the same way as it was stated on the most recently submitted version of your Form 2B. Attach additional pages as necessary, indicating the corresponding section number on this NMP form. For additional help in filling out this form please read the attached instructions. The 2008 General Permit, current fee schedule, and related forms are available from the Water Protection Bureau at (406) 444-3080 or http://www.deq.mt.gov/wqinfo/MPDES/CAFO.asp

Section A - NMP Status *(Check one):*

[X] New — No prior NMP submitted for this site.

[ ] Modification — Change or update to existing NMP.

Permit Number: MT -G010132 (Specify the permit number that was previously assigned to your facility.)

Section B - Facility or Site Information:

Site Name HAALAND'S T-BONE FEEDERS CORP.

Site Location 7636 SHEPHERD ROAD, SHEPHERD MT

Nearest City or Town SHEPHERD County YELLOWSTONE

Section C - Applicant (Owner/Operator) Information:

Owner or Operator Name NORMAN HAALAND

Mailing Address P.O. BOX 97

City, State, and Zip Code SHEPHERD, MT 59079

Phone Number (406) 855-4832

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Section D - NMP Minimum Elements:

1. Livestock Statistics

Animal Type and number of animals	*# of Days on Site (per year)*	*Annual Manure Production (tons, cu. yds.or gal)*
1. FINISHING CATTLE 14911	365	27,756.62 TONS
2.		
3.		
4.		
5.		
6.		
7.		
8.		

Method used for estimating annual manure production:

TOTAL HEAD DAYS x 40#

2. Manure Handling

Describe manure handling at the facility:

USE LOADER TO LOAD SPREADER TRUCKS, TRUCKS SPREAD TO FIELDS

Frequency of Manure Removal from confinement areas:

ANNUALLY

Is this manure temporarily stored in any location other than the confinement area? ☐ Yes ☒ No

If so then how and where?

Is manure stored on impervious surface? ☐ Yes ☒ No

If yes, describe type and characteristics of this surface:

3. Waste Control Structures

Waste Control Structure (name/type)	*Length (ft)*	*Width (ft)*	*Depth (ft)*	*Volume (cubic ft or gallons)*
1. LAGOON MAIN LOT	400'	150'	3'	180,000 cubic feet
2. LAGOON CROFT	50'	50'	3'	7500 cubic feet
3. LAGOON A	100'	65'	4'	39,000 cubic feet
4. LAGOON C	250'	130'	4'	130,000 cubic feet
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

4. Disposal of Dead Animals

Describe how dead animals are disposed of at this facility:

BAKER COMMODITIES HAULS THEM

5. Clean Water Diversion Practices

Describe how clean water is diverted from production area:

CULVERTS AND CEMENT DITCHES

6. Prohibiting Animals and Wastes m Contact with State Waters

Describe how animals and wastes are prohibited from direct contact with state waters:

ANIMALS (cattle) KEPT IN FENCED PENS IN FEEDLOT

WASTE ROUTED TO LAGOONS

7. Chemicals and Contaminants

Describe how chemicals and other contaminants are handled on-site:

NONE

8. Best Management Practice (BMPS)

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **production area**. Indicate the location of these measures. Include a schedule for implementation of each of these measures. Examples of BMP measures could include but are not limited to: constructing ditches, terraces, and waterways above an open lot to divert clean water run on; installing gutters, downspouts and buried conduits to divert roof drainage; providing more roofed area; decreasing open lot surface area; repairing or adjusting water systems to minimize water wastage; using practical amounts of water for cooling purposes; recycling water if practical and applicable.

THERE"S A LAGOON IN THE MIDDLE OF PENS 72 and 62, THAT IS USED FOR

PENS 112 THRU 1. WHEN NEEDED THEY ARE PUMPED TO THE LAGOON.

PENS 128 and 127 ARE A NATURAL FLOW TO LAGOON A

PENS 126 THRU 120 ARE A NATURAL FLOW TO LAGOON C

PENS 1C THRU 4C ARE A NATURAL FLOW TO LAGOON CROFT

Describe in detail all temporary, permanent and structural Best Management Practices (BMPs) which will be used to control runoff of pollutants from facility's **land application area**. Indicate the location of these practices. If not already in use, include a schedule for implementation of each of these measures. Attached details and specifications may be used to supplement this description. Examples of BMP measures could include but are not limited to: maintaining setbacks from surface waters for manure applications; managing irrigation practices to prevent ponding of wastewater on land application sites; never spray irrigating wastes onto frozen ground; consulting with the Department prior to applying any liquid waste to frozen or snow-covered ground; applying wastes at agronomic rates.

Plant sampling/tissue analysis	yes/(no)	Rotational grazing	(yes)/no
Conservation or reduced tillage	yes/(no)	Manure injection or incorporation	(yes)/no
Terraces or other water control structures	yes/(no)	Contour plantings	yes/(no)
Riparian buffers or vegetative filter strips	yes/(no)	Winter "scavenger" or cover crops	yes/(no)

Other examples

9. Implementation, Operation, Maintenance and Record Keeping – Guidance

The permittee is required to develop guidance addressing implementation of NMP, proper operation and maintenance of the facility, and record keeping as described in Part II of the permit.

Has a guidance document been developed for the facility? ☒ Yes ☐ No

Certify the document addresses the following requirements:

Implementation of the NMP:	☒ Yes	☐ No
Facility operation and maintenance:	☒ Yes	☐ No
Record keeping and reporting:	☒ Yes	☐ No
Sample collection and analysis:	☒ Yes	☐ No
Manure transfer:	☒ Yes	☐ No

Provide name, date and location of most recent documentation:

NMP 2004, All Docum'ts at T-Bone Feeders

If your answer to any of the above question is no, provide explanation

Section E – Land Application

Will manure be land applied to land either owned, rented, or leased by the owner or operator of the facility?

☐ No If no, then provide an explanation of how animal waste at this site are managed.

☐ Yes If yes, then the information requested in Section E must be provided.

Photos and/or Maps

Attach an aerial photograph or map of the site where manure is to be applied. (Use multiple photos/maps if necessary to show required details.) The photo(s)/map(s) must be printed on no larger than an 11"x17" piece of paper, and must clearly identify the following items:

- Individual field boundaries for all planned land application areas
- A name, number, letter or other means of identifying each individual land application field
- The location of any down-gradient surface waters
- The location of any down-gradient open tile line intake structures
- The location of any down-gradient sinkholes
- The location of any down-gradient agricultural well heads
- The location of all conduits to surface waters
- The specific manure/waste handling or nutrient management restrictions associated with each land application field.
- The soil type(s) present and their locations within the individual land application field(s)
- The location of buffers and setbacks around state surface waters, well heads, etc.

Land Application Equipment Calibration

Describe the type of equipment used to land apply wastes and the calibrating procedures:

Manure Sampling and Analysis Procedures

A representative manure sample will be analyzed a minimum of once annually for Total Nitrogen, and Total Phosphorus. Analysis results will be reported in lbs/ton or lbs/1,000 gal. Results of these analyses will be used in determining application rates for manure, litter, and process wastewater.

Manure Sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Soil Sampling and Analysis Procedures

A representative soil sample from the top 6 inch layer of soil in each field will be analyzed for phosphorus content at least once every five years. Analyses will be conducted by a qualified laboratory, using the Olsen P test. Results will be reported in parts per million (ppm) and will be used in determining application rates for manure, litter, and process wastewater.

Soil sample collection will occur according to the following method:

☒ The recommended method(s) found in Section 5 of Department Circular DEQ 9

☐ Other (describe) _____

Land Application Data-Narrative approach

The following must be filled out <u>for each field</u> to which manure, litter or process wastewater will or may be applied for the period of the permit (5 years). Use as many sheets as necessary to fulfill this requirement. **<u>Fields with identical crops and soil types may be grouped together.</u>**

Crops and Manure	
Field Name and <u>spreadable acres</u> for each (for fields with identical crops and soils type):	
Crop 1 (year 1 or ?) plant species	Corn
Irrigated (Y/N)	some sprinkler + some flood
Yield Goal (ton/ac or bushel/ac)	32 ton per acre
N Content of soil as nitrate (lbs/acre or ppm)	28
P Content of soil as P_2O_5 (lbs/acre or ppm)	11-12
Time of Year When Application will Occur (month)	October
Application frequency (per year by month)	yearly
Form of manure (liquid/solid)	solid
Method of Application	spreader trucks
Is manure incorporated or broadcast?	incorporated
Frequency of Application (yearly, biannual, etc.?)	yearly
Crop 2	alfalfa
Irrigated (Y/N)	flood irrigated
Yield Goal (ton/ac or bushel/ac)	6-7 ton per acre
N Content of soil as Nitrate (lbs/acre or ppm)	28
P Content of soil as P_2O_5 (lbs/acre or ppm)	11-12
Time of Year When Application will Occur (month)	October
Application frequency (per year, by month)	yearly
Form of manure (liquid/solid)	solid
Method of Application	spreader trucks
Is manure broadcast, injected or incorporated?	incorporated
Frequency of Application (Annual, Biannual, ,etc?)	yearly

Phosphorus Risk Assessment

The permittee shall assess the risk of phosphorus contamination of state waters. An assessment shall be conducted for each field, under the control of the operator, to which manure, litter or process wastewater will or may be applied. If a new field is added in the future, then the permittee must submit a revised (modified) NMP. The permittee has the option of using either Method A or Method B (below) to complete the assessment. Copies of all tables and calculations used to complete the assessments, as well as the results of the assessments, shall be submitted to the Department and copies shall be maintained on-site at the facility and available for Departmental review. The results of the assessments shall be used to determine the appropriate basis for land application of wastes from the facility.

Method Used

Indicate which method will be used to determine phosphorus application:

☒ Method A – Representative Soil Sample
☐ Method B – Phosphorus Index

Method A – Representative Soil Sample

a) Obtain one or more representative soil sample(s) from the field.
b) Have the sample analyzed for Phosphorus by a qualified lab. The "Olsen P test" must be used for the analysis, and the result must be reported in parts per million (ppm).
c) Using the results of the Olsen P test, determine the application basis according to the Table below

Soil Test	
Olsen P Soil Test Result (ppm)	***Application Basis***
<25.0	Nitrogen Needs Of Crop
25.1 - 100.0	Phosphorus Needs Of Crop
100.0 - 150.0	Phosphorus Needs up to Crop Removal Rate
>150.0	No Application

Method B – Phosphorus Index

a) Complete a Phosphorus Index according to for each crop grown on each field. Complete table in Appendix A to calculate phosphorus index. For information on filling out specific sections Appendix A, please refer to Attachment 2 of Department Circular DEQ 9.
b) Using the calculated Total Phosphorus Index Value, assign the overall site/field vulnerability to phosphorus loss according to the table below.

Total Phosphorus	
Total Phosphorus Index Value	***Site Vulnerability to Phosphorus Loss***
<11	Low
11-21	Medium
22-43	High
>43	Very High

c) Using the calculated Site Vulnerability to Phosphorus Loss, determine the appropriate application basis according to the table below.

Site Vulnerability to Phosphorus Loss	
Site Vulnerability to Phosphorus Loss	***Application Basis***
Low	Nitrogen Needs
Medium	Nitrogen Needs
High	Phosphorus Need Up to Crop Removal
Very High	Phosphorus Crop Removal or No Application

d) The permittee will complete the *Nutrient Budget Worksheet*, below, for each crop grown on each field to which manure or process waste water is or may be applied during the first year of application. A copy of each Nutrient Budget Worksheet will be maintained on site, and a copy will be submitted to the Department.

Nutrient Budget Worksheet			
Site/Field:			
Nutrient Budget		***Nitrogen-based Application***	***Phosphorus-based Application***
	Crop Nutrient Needs, lbs/acre included in Department Circular DEQ 9		
(-)	Credits from previous legume crops, lbs/acre (from DEQ-9), as applicable		
(-)	Residuals from past manure production, lbs/acre (lbs/acre applied in previous year(s) x fractions listed in DEQ-9)		
(-)	Nutrients supplied by commercial fertilizer and Biosolids, lbs/acre		
(-)	Nutrients supplied in irrigation water, lbs/acre		
	= Additional Nutrients Needed, lbs/acre		
	Total Nitrogen and Phosphorus in manure, lbs/ton or lbs/1,000 gal (from manure test)		
(x)	Nutrient Avalability factor (for Nitrogen based application see DEQ-9, below; for Phosphorus based application use 1.0)		
	= Available Nutrients in Manure, lbs/ton or lbs/1,000 gal		
	Additional Nutrients needed, lbs/acre (calculated above)		
(/)	Available Nutrients in Manure, lbs/ton or lbs/1,000 gal (calculated above)		
	= Manure Application Rate, tons/acre or 1,000 gal/acre		

Comments:

Currently obtaining field soil samples to determine carryover, if any, from previous manure spreading and calculating needs for upcoming crop year.

Section F - CERTIFICATION

Permittee Information:

This Form NMP must be completed, signed, and certified as follows:

- For a corporation, by a principal officer of at least the level of vice president;
- For a partnership or sole proprietorship, by a general partner or the proprietor, respectively; or
- For a municipality, state, federal, or other public facility, by either a principal executive officer or ranking elected official.

All Permittees Must Complete the Following Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information; including the possibility of fine and imprisonment for knowing violations. [75-5-633, MCA]

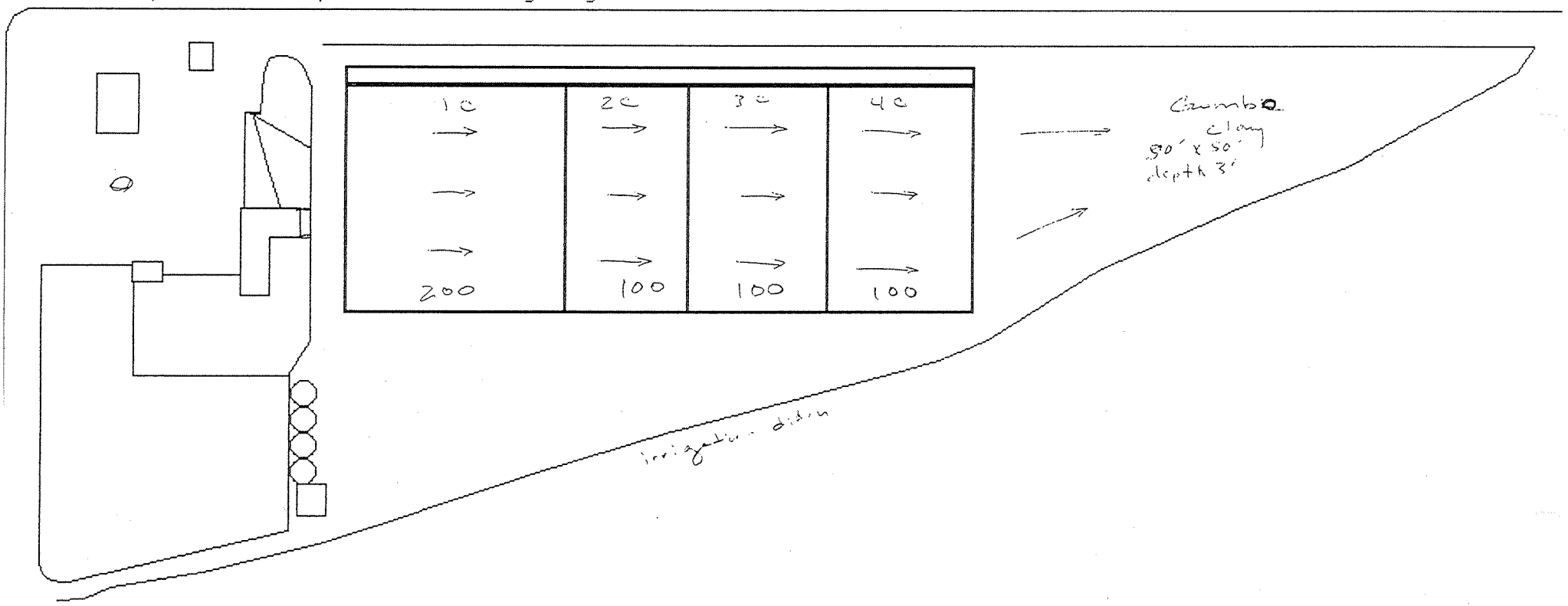
A. Name (Type or Print)	
NORMAN HAALAND	
B. Title (Type or Print) PRESIDENT	**C. Phone No.** 406-373-6006
D. Signature Norman Haaland	**E. Date Signed** 1-29-2009

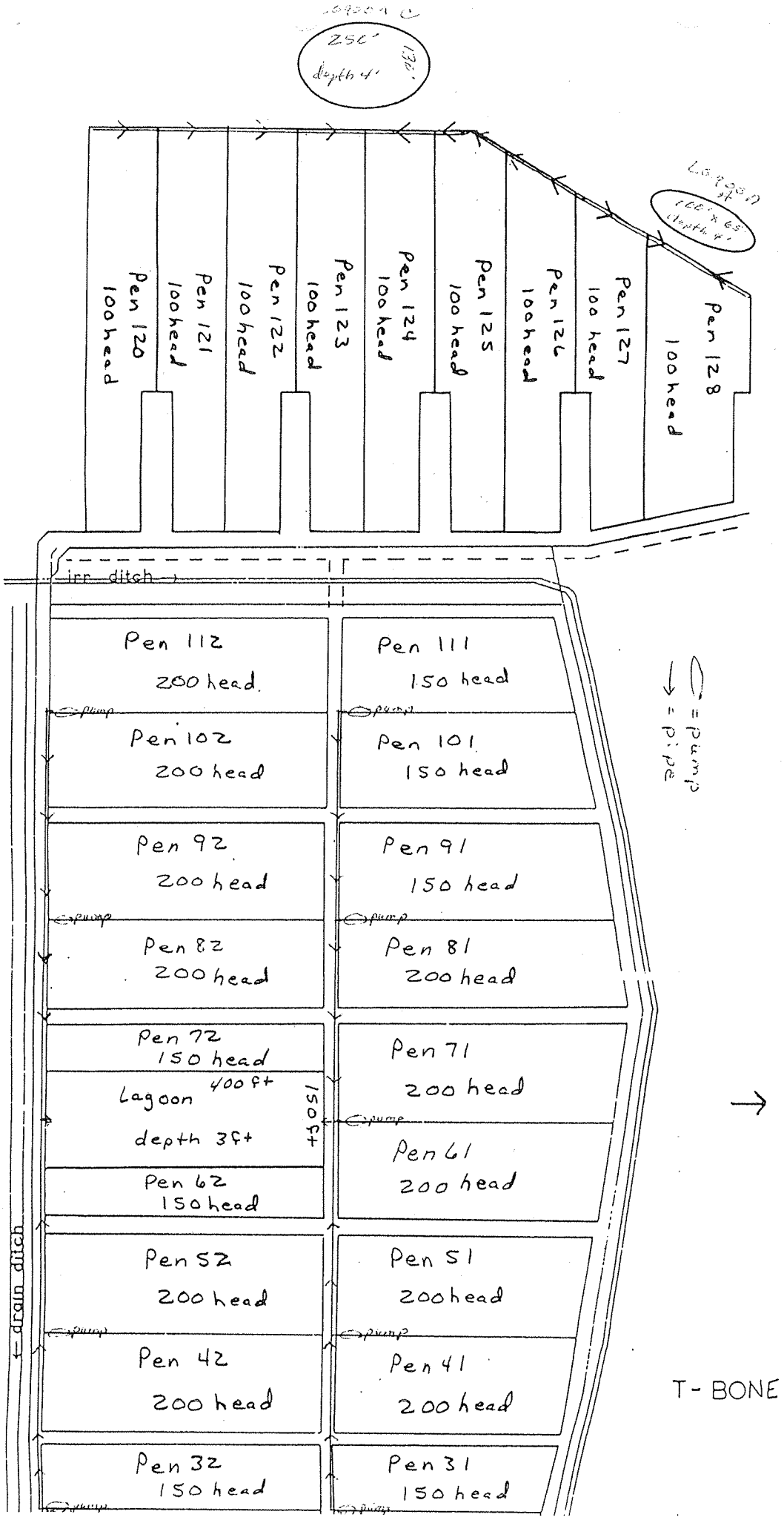
Return the Form NMP, Nutrient Management Plan to:

Department of Environmental Quality
Water Protection Bureau
PO Box 200901
Helena, MT 59620-0901
(406) 444-3080

RECEIVED
FEB 03 2009
DEQ/WPB
PERMITTING & COMPLIANCE DIV.

Croft - Shepherd Road and Shepherd Road East - Drainage Design 2007




250'
depth 4'
125'
Lagoon
(100' x 65'
depth 4'
Pen 120
100 head
Pen 121
100 head
Pen 122
100 head
Pen 123
100 head
Pen 124
100 head
Pen 125
100 head
Pen 126
100 head
Pen 127
100 head
Pen 128
100 head
irr ditch
Pen 112
200 head
Pump
Pen 111
150 head
Pump
Pen 102
200 head
Pen 101
150 head
= pump
= pipe
Pen 92
200 head
Pump
Pen 91
150 head
Pump
Pen 82
200 head
Pen 81
200 head
Pen 72
150 head
Lagoon
400 ft
depth 3ft
150 ft
Pen 71
200 head
Pump
Pen 61
200 head
Pen 62
150 head
drain ditch
Pen 52
200 head
Pump
Pen 51
200 head
Pump
Pen 42
200 head
Pen 41
200 head
Pen 32
150 head
Pump
Pen 31
150 head
Pump
T- BONE

STUKENHOLTZ LABORATORY, INC.

2924 Addison Ave. E., P.O. Box 353 Twin Falls
208.734.3050, Fax: 734.3919 www.stukenholtz.com

274

MPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 59108

406/656-2804 406/656-2005
Report No.: 41920
Date Received: 9/08/10
Date Reported: 9/09/10

SOIL TEST DATA	Sample 1		Sample 2
pH	7.3	M	
Salts, mmhos/cm	1.4	L	
Chlorides, ppm	22	L	
Sodium, meq/100g	0.1	VL	
CEC, meq/100g	14.5	M	
Excess Lime, %	0.4	VL	
Organic Matter, %	2.66	H	
Organic N, lb/Acre	50	M	
Ammonium - N, ppm	6.2	L	
Nitrate - N, ppm	19	M	
Phosphorus, ppm	41	VH	
Potassium, ppm	485	VH	
alcium, meq/100g	9.7	H	
Magnesium, meq/100g	3.1	VH	
Sulfate - S, ppm	11	M	
Zinc, ppm	2.5	H	
Iron, ppm	12.4	H	
Manganese, ppm	6.1	H	
Copper, ppm	0.7	M	
Boron, ppm	1.16	H	

	Sample 1	Sample 2
Grower:	BLUE CREEK FEEDERS	
Sample Identity	OLSEN FIELD	
Crop	HAYLAGE	
Yield Goal	3 T	
Acres	80	
Prev. Crop T/Acre	HAYLAGE	
Manure T/Acre		
Prev. Applied Nutrients		

RECOMMENDATIONS, lbs. Nutrients or Units Per Acre.

Nitrogen	0
P_2O_5 - Phosphate	0
K_2O - Potash	0
Calcium	0
Magnesium	0
Sulfate - Sulfur	10
Zinc	0
Iron	0
Manganese	0
Copper	0
Boron	0
Elemental Sulfur	0

RELATION OF CEC TO SOIL TEXTURE	
0 - 5	Sand
5 - 12	Loamy Sand
12 - 18	Sandy Loam
18 - 24	Silt Loam
24 -36	Clay Loam
36 +	Clay

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recommended Potassium	Actual % Calcium	Recommended Calcium	Actual % Magnesium	Recommended Magnesium	Actual % Sodium	Recommended Sodium
1	11.1	3.0 - 6.0 %	66.9	65 - 80 %	21.4	15 - 25 %	0.7	< 3.0 %
2								

STUKENHOLTZ LABORATORY, INC.

P.O. BOX 353 ADDISON AVENUE EAST . . . TWIN FALLS, ID . 83303-0353 . 1-800-759-3050
PHONE: (208)734-3050 TOLL FREE: (800)759-3050 FAX: (208)734-3919

SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: BLUE CREEK FEEDERS

2312974;274

406/656-2804
406/656-2005

Report No.: 41921
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	6.6	M	
SALTS, mmhos/cm	1	L	
CHLORIDES, ppm	24	L	
SODIUM, meq/100g	0.1	VL	
CEC, meq/100g	16.3	M	
EXCESS LIME, %	0.2	VL	
ORGANIC MATTER, %	5.46	VH	
ORGANIC N, lb/Acre	65	M	
AMMONIUM-N, ppm	6.7	L	
NITRATE-N, ppm	11	M	
PHOSPHORUS, ppm	23	M	
POTASSIUM, ppm	480	VH	
CALCIUM, meq/100g	9.8	M	
MAGNESIUM, meq/100g	3.8	VH	
SULFATE-S, ppm	9	L	
ZINC, ppm	2.3	H	
IRON, ppm	20.3	H	
MANGANESE, ppm	4.3	M	
COPPER, ppm	0.6	L	
BORON, ppm	0.80	M	
SOIL TEXTURE	See Table		See Table

	Sample 1	Sample 2
SAMPLE IDENTITY	CENTER FIELD	
CROP	HAYLAGE	
YIELD GOAL	3 T	
ACRES	110	
PAST CROP T/Acre	HAYLAGE	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	

RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre

NITROGEN	0
P_2O_5 - PHOSPHATE	50
K_2O - POTASH	0
CALCIUM	0
MAGNESIUM	0
SULFATE-SULFUR	20
ZINC	0
IRON	0
MANGANESE	0
COPPER	0
BORON	0
ELEMENTAL SULFUR	0

RATINGS : VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	9.8		60.1		23.3		0.6	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Supervised by: Paul Stukenholtz

STUKENHOLTZ LABORATORY, INC.

P.O. BOX 353 ADDISON AVENUE EAST . TWIN FALLS, ID 83303-0353 . 1-800-759-3050
PHONE: (208)734-3050 TOLL FREE: (800)759-3050 FAX: (208)734-3919

SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: BLUE CREEK FEEDERS

2312972:274

406/656-2804
406/656-2005

Report No.: 41919
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1	Sample 2		Sample 1	Sample 2
pH	7.0	M	SAMPLE IDENTITY	EAST FIELD	
SALTS, mmhos/cm	1.2	L	CROP	HAYLAGE	
CHLORIDES, ppm	38	M	YIELD GOAL	3 T	
SODIUM, meq/100g	0.1	VL	ACRES	80	
CEC, meq/100g	15.9	M	PAST CROP T/Acre	HAYLAGE	
EXCESS LIME, %	0.2	VL	MANURE T/Acre	0	
ORGANIC MATTER, %	3.73	H	PREV. APPLIED NUTRIENTS	0	
ORGANIC N, lb/Acre	125	VH	RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre		
AMMONIUM-N, ppm	6.8	L			
NITRATE-N, ppm	16	M	NITROGEN	0	
PHOSPHORUS, ppm	50	VH	P_2O_5 - PHOSPHATE	0	
POTASSIUM, ppm	560	VH	K_2O - POTASH	0	
CALCIUM, meq/100g	9.9	M	CALCIUM	0	
MAGNESIUM, meq/100g	4.0	VH	MAGNESIUM	0	
SULFATE-S, ppm	18	M	SULFATE-SULFUR	0	
ZINC, ppm	3.3	H	ZINC	0	
IRON, ppm	22.9	H	IRON	0	
MANGANESE, ppm	10.0	H	MANGANESE	0	
COPPER, ppm	0.9	M	COPPER	0	
BORON, ppm	1.25	H	BORON	0	
SOIL TEXTURE	See Table	See Table	ELEMENTAL SULFUR	0	

RATINGS : VL - Very Low L - Low M - Meduim H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	11.7		62.3		25.2		0.6	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Supervised by: Paul Stukenholtz

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SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312978:274

406/656-2804
406/656-2005

Report No.: 41925
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	7.6	H	
SALTS, mmhos/cm	0.9	L	
CHLORIDES, ppm	25	L	
SODIUM, meq/100g	0.2	VL	
CEC, meq/100g	17.9	M	
EXCESS LIME, %	0.6	L	
ORGANIC MATTER, %	2.39	M	
ORGANIC N, lb/Acre	90	M	
AMMONIUM-N, ppm	2.2	VL	
NITRATE-N, ppm	8	L	
PHOSPHORUS, ppm	32	H	
POTASSIUM, ppm	285	H	
CALCIUM, meq/100g	10.8	M	
MAGNESIUM, meq/100g	5.9	VH	
SULFATE-S, ppm	8	L	
ZINC, ppm	0.8	L	
IRON, ppm	11.3	H	
MANGANESE, ppm	2.5	L	
COPPER, ppm	0.7	M	
BORON, ppm	0.85	M	
SOIL TEXTURE	See Table		See Table

	Sample 1	Sample 2
SAMPLE IDENTITY	NORMS HOUSE	
CROP	CORN SILAGE	
YIELD GOAL	35 T	
ACRES	24	
PAST CROP T/Acre	CORN SILAGE 1	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	

RECOMMENDATIONS lbs or Units Actual Nutrients per Acre

NITROGEN	245
P_2O_5 - PHOSPHATE	95
K_2O - POTASH	0
CALCIUM	0
MAGNESIUM	0
SULFATE-SULFUR	60
ZINC	10
IRON	0
MANGANESE	6
COPPER	0
BORON	0
ELEMENTAL SULFUR	0

RATINGS: VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	5.3		60.3		33.0		1.1	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.
Crop1 Should use a foliar nutrient spray containing copper.

Supervised by: Paul Stukenholtz

STUKENHOLTZ LABORATORY, INC.

P.O. BOX 353 ADDISON AVENUE EAST . . TWIN FALLS, ID . 83303-0353 . 1-800-759-3050
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SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312980:274

406/656-2804
406/656-2005

Report No.: 41927
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	8.0	H	
SALTS, mmhos/cm	1	L	
CHLORIDES, ppm	24	L	
SODIUM, meq/100g	0.3	VL	
CEC, meq/100g	16.3	M	
EXCESS LIME, %	1.4	M	
ORGANIC MATTER, %	2.22	M	
ORGANIC N, lb/Acre	85	M	
AMMONIUM-N, ppm	2.2	VL	
NITRATE-N, ppm	11	M	
PHOSPHORUS, ppm	49	VH	
POTASSIUM, ppm	365	H	
CALCIUM, meq/100g	10.2	M	
MAGNESIUM, meq/100g	4.6	VH	
SULFATE-S, ppm	10	L	
ZINC, ppm	1.3	M	
IRON, ppm	9.6	M	
MANGANESE, ppm	3.3	M	
COPPER, ppm	0.6	L	
BORON, ppm	1.00	M	
SOIL TEXTURE	See Table		See Table

	Sample 1	Sample 2
SAMPLE IDENTITY	LITTLE BUTTE	
CROP	CORN SILAGE	
YIELD GOAL	35 T	
ACRES	23	
PAST CROP T/Acre	CORN SILAGE 1	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	

RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre

NITROGEN	245
P_2O_5 - PHOSPHATE	0
K_2O - POTASH	0
CALCIUM	0
MAGNESIUM	0
SULFATE-SULFUR	60
ZINC	9
IRON	0
MANGANESE	4
COPPER	0
BORON	0
ELEMENTAL SULFUR	0

RATINGS : VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	7.5		62.6		28.2		1.8	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.
Crop1: Should use a foliar nutrient spray containing copper

Supervised by: Paul Stukenholtz

STUKENHOLTZ LABORATORY, INC.

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SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312979:274

406/656-2804
406/656-2005

Report No.: 41926
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	8.3	H	
SALTS, mmhos/cm	1.4	M	
CHLORIDES, ppm	33	M	
SODIUM, meq/100g	0.6	VL	
CEC, meq/100g	22.2	H	
EXCESS LIME, %	1.9	M	
ORGANIC MATTER, %	2.92	H	
ORGANIC N, lb/Acre	105	H	
AMMONIUM-N, ppm	7.2	L	
NITRATE-N, ppm	10	L	
PHOSPHORUS, ppm	35	H	
POTASSIUM, ppm	425	VH	
CALCIUM, meq/100g	14.2	M	
MAGNESIUM, meq/100g	6.0	VH	
SULFATE-S, ppm	12	M	
ZINC, ppm	1.3	M	
IRON, ppm	6.2	M	
MANGANESE, ppm	4.5	M	
COPPER, ppm	0.7	M	
BORON, ppm	1.65	H	
SOIL TEXTURE	See Table		See Table

	Sample 1	Sample 2
SAMPLE IDENTITY	BIG BUTTE	
CROP	CORN SILAGE	
YIELD GOAL	35 T	
ACRES	48	
PAST CROP T/Acre	CORN SILAGE 1	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	
RECOMMENDATIONS lbs or Units Actual Nutrients per Acre		
NITROGEN	210	
P_2O_5 - PHOSPHATE	65	
K_2O - POTASH	0	
CALCIUM	0	
MAGNESIUM	0	
SULFATE-SULFUR	50	
ZINC	9	
IRON	0	
MANGANESE	0	
COPPER	0	
BORON	0	
ELEMENTAL SULFUR	0	

RATINGS: VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	6.4		64.0		27.0		2.7	
2		3.0-6.0%		65-80%		15-25%		<3.0%

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1: Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1: Above recommendations are for broadcast placement & should be reduced for band application.
Crop1: Should use a foliar nutrient spray containing copper.

Supervised by: Paul Stukenholtz

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SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312981:274

406/656-2804
406/656-2005

Report No.: 41928
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	8.0	H	
SALTS, mmhos/cm	1	L	
CHLORIDES, ppm	26	M	
SODIUM, meq/100g	0.3	VL	
CEC, meq/100g	18.6	H	
EXCESS LIME, %	0.9	L	
ORGANIC MATTER, %	2.43	M	
ORGANIC N, lb/Acre	90	M	
AMMONIUM-N, ppm	5.7	L	
NITRATE-N, ppm	12	M	
PHOSPHORUS, ppm	36	H	
POTASSIUM, ppm	370	H	
CALCIUM, meq/100g	12.7	H	
MAGNESIUM, meq/100g	4.4	VH	
SULFATE-S, ppm	11	M	
ZINC, ppm	1.1	M	
IRON, ppm	8.1	M	
MANGANESE, ppm	5.7	H	
COPPER, ppm	0.6	L	
BORON, ppm	1.15	H	
SOIL TEXTURE	See Table		See Table

	Sample 1	Sample 2
SAMPLE IDENTITY	STEIGER PVT	
CROP	CORN SILAGE	
YIELD GOAL	35 T	
ACRES	120	
PAST CROP T/Acre	CORN SILAGE 1	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	

RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre

NITROGEN	225
P_2O_5 - PHOSPHATE	65
K_2O - POTASH	0
CALCIUM	0
MAGNESIUM	0
SULFATE-SULFUR	50
ZINC	9
IRON	0
MANGANESE	0
COPPER	0
BORON	0
ELEMENTAL SULFUR	0

RATINGS: VL - Very Low L - Low M - Medulm H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	6.6		68.3		23.7		1.6	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.
Crop1: Should use a foliar nutrient spray containing copper.

Supervised by: Paul Stukenholtz

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4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312977:274

406/656-2804
406/656-2005

Report No.: 41924
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2		Sample 1	Sample 2
pH	8.2	H		SAMPLE IDENTITY	CROFT PVT	
SALTS, mmhos/cm	1.2	L		CROP	CORN SILAGE	
CHLORIDES, ppm	28	M		YIELD GOAL	35 T	
SODIUM, meq/100g	0.2	VL		ACRES	120	
CEC, meq/100g	20.4	H		PAST CROP T/Acre	CORN SILAGE 1	
EXCESS LIME, %	1.2	M		MANURE T/Acre	0	
ORGANIC MATTER, %	2.75	H		PREV. APPLIED NUTRIENTS	0	
ORGANIC N, lb/Acre	100	H		RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre		
AMMONIUM-N, ppm	5.6	L				
NITRATE-N, ppm	10	L		NITROGEN	220	
PHOSPHORUS, ppm	24	M		P_2O_5 - PHOSPHATE	105	
POTASSIUM, ppm	240	M		K_2O - POTASH	70	
CALCIUM, meq/100g	14.6	H		CALCIUM	0	
MAGNESIUM, meq/100g	4.8	VH		MAGNESIUM	0	
SULFATE-S, ppm	8	L		SULFATE-SULFUR	60	
ZINC, ppm	0.8	L		ZINC	10	
IRON, ppm	6.8	M		IRON	0	
MANGANESE, ppm	2.5	L		MANGANESE	6	
COPPER, ppm	0.5	L		COPPER	0.5	
BORON, ppm	1.10	M		BORON	0	
SOIL TEXTURE	See Table		See Table	ELEMENTAL SULFUR	0	

RATINGS : VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	3.9		71.6		23.5		1.0	
2		3.0-6.0%		65-80%		15-25%		<3.0%

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.
Crop1: Should use a foliar nutrient spray containing copper.

Supervised by: Paul Stukenholtz

STUKENHOLTZ LABORATORY, INC.

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SIMPLOT GROWER SOLUTIONS
P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312975:274

406/656-2804
406/656-2005

Report No.: 41922
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2
pH	7.8	H	
SALTS, mmhos/cm	1.2	L	
CHLORIDES, ppm	34	M	
SODIUM, meq/100g	0.6	L	
CEC, meq/100g	18.9	H	
EXCESS LIME, %	0.7	L	
ORGANIC MATTER, %	2.52	H	
ORGANIC N, lb/Acre	95	H	
AMMONIUM-N, ppm	2.4	VL	
NITRATE-N, ppm	8	L	
PHOSPHORUS, ppm	28	H	
POTASSIUM, ppm	245	M	
CALCIUM, meq/100g	12.2	M	
MAGNESIUM, meq/100g	5.3	VH	
SULFATE-S, ppm	12	M	
ZINC, ppm	0.8	L	
IRON, ppm	9.9	M	
MANGANESE, ppm	8.5	H	
COPPER, ppm	0.8	M	
BORON, ppm	1.05	M	
SOIL TEXTURE	See Table		See Table

De Vries

	Sample 1	Sample 2
SAMPLE IDENTITY	~~DAURIES~~ 1 FIELD	
CROP	CORN SILAGE	
YIELD GOAL	35 T	
ACRES	72	
PAST CROP T/Acre	CORN SILAGE 1	
MANURE T/Acre	0	
PREV. APPLIED NUTRIENTS	0	

RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre

NITROGEN	240
P_2O_5 - PHOSPHATE	105
K_2O - POTASH	55
CALCIUM	0
MAGNESIUM	0
SULFATE-SULFUR	50
ZINC	10
IRON	0
MANGANESE	0
COPPER	0
BORON	0
ELEMENTAL SULFUR	100

RATINGS : VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	4.3		64.6		28.0		3.2	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Sodium is too high. Elemental Sulfur or Gypsum will help reduce the harmful effects.
Crop1:Examples of acid forming fertilizers are: 21-0-0/Thio-Sul/Nitro-Sul and Disintegrating Sulfurs.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.

Supervised by: Paul Stukenholtz

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P.O. BOX 80125
4804 DANFORD DRIVE
BILLINGS MT 591
GROWER: T-BONE FEEDERS

2312976:274

406/656-2804
406/656-2005

Report No.: 41923
Date Received: 9/08/10
Date Reported: 9/09/10

Soil Test Data	Sample 1		Sample 2		Sample 1	Sample 2
pH	7.7	H		SAMPLE IDENTITY	~~DAURIES~~ DeVries 2 FLD	
SALTS, mmhos/cm	0.9	L		CROP	CORN SILAGE	
CHLORIDES, ppm	16	L		YIELD GOAL	35 T	
SODIUM, meq/100g	0.2	VL		ACRES	20	
CEC, meq/100g	15.4	M		PAST CROP T/Acre	CORN SILAGE 1	
EXCESS LIME, %	0.8	L		MANURE T/Acre	0	
ORGANIC MATTER, %	1.88	M		PREV. APPLIED NUTRIENTS	0	
ORGANIC N, lb/Acre	70	M		RECOMMENDATIONS, lbs or Units Actual Nutrients per Acre		
AMMONIUM-N, ppm	5.2	L				
NITRATE-N, ppm	9	L		NITROGEN	255	
PHOSPHORUS, ppm	27	H		P_2O_5 - PHOSPHATE	105	
POTASSIUM, ppm	245	M		K_2O - POTASH	55	
CALCIUM, meq/100g	10.5	H		CALCIUM	0	
MAGNESIUM, meq/100g	3.9	VH		MAGNESIUM	0	
SULFATE-S, ppm	9	L		SULFATE-SULFUR	60	
ZINC, ppm	0.8	L		ZINC	10	
IRON, ppm	10.0	M		IRON	0	
MANGANESE, ppm	6.1	H		MANGANESE	0	
COPPER, ppm	0.6	L		COPPER	0	
BORON, ppm	0.75	M		BORON	0	
SOIL TEXTURE	See Table		See Table	ELEMENTAL SULFUR	0	

RATINGS : VL - Very Low L - Low M - Medium H - High VH - Very High

ACTUAL AND RECOMMENDED PERCENT OF CEC

SAMPLE	Actual % Potassium	Recom. Potassium	Actual % Calcium	Recom. Calcium	Actual % Magnesium	Recom. Magnesium	Actual % Sodium	Recom. Sodium
1	5.3		68.2		25.3		1.3	
		3.0-6.0%		65-80%		15-25%		<3.0%
2								

CEC / SOIL TEXTURE

0-5	Sand
5-12	Loamy Sand
12-18	Sandy Loam
18-24	Silt Loam
24-36	Clay Loam
36+	Clay

REMARKS

Crop1:Split application of N is advised. Monitor crop with plant tissue tests and add N as needed.
Crop1:Above recommendations are for broadcast placement & should be reduced for band application.
Crop1: Should use a foliar nutrient spray containing copper.

Supervised by: Paul Stukenholtz

ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * ell@energylab.com

LABORATORY ANALYTICAL REPORT

Client: T-Bone Feeders
Project:
Lab ID: B09031661-001
Client Sample ID: Pile 42 Feedlot

Report Date: 04/07/09
Collection Date: 03/24/09 08:00
DateReceived: 03/24/09
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
CHEMICAL CHARACTERISTICS							
Nitrate as N, KCL Extract	0.011	lbs/ton		0.002		ASA33-8	03/26/09 11:14 / srm
- The analysis was performed on an as received moisture basis							
METALS, TOTAL - EPA SW846							
Phosphorus	3.72	lbs/ton		0.02		SW6010B	03/30/09 18:31 / tao

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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QA/QC Summary Report

Client: T-Bone Feeders
Project:

Report Date: 04/01/09
Work Order: B09031661

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B									Batch: 37989
Sample ID: MB-37989	Method Blank				Run: ICP202-B_090330A				03/30/09 18:22
Phosphorus	ND	mg/kg	0.8						
Sample ID: LCS1-37989	Laboratory Control Sample				Run: ICP202-B_090330A				03/30/09 18:27
Phosphorus	572	mg/kg	10	91	70	130			
Sample ID: B09031894-001ADIL	Serial Dilution				Run: ICP202-B_090330A				03/30/09 20:24
Phosphorus	37.8	mg/kg	10		0	0		10	N
Sample ID: MB-37989	Method Blank				Run: ICP202-B_090331A				03/31/09 15:08
Phosphorus	4	mg/kg	0.8						
Sample ID: B09031895-001AMS3	Sample Matrix Spike				Run: ICP202-B_090331A				03/31/09 15:16
Phosphorus	710	mg/kg	10	100	75	125			
Sample ID: B09031895-001AMSD3	Sample Matrix Spike Duplicate				Run: ICP202-B_090331A				03/31/09 15:20
Phosphorus	691	mg/kg	10	98	75	125	2.6	20	
Method: SW6010B									Analytical Run: ICP202-B_090330A
Sample ID: QCS	Initial Calibration Verification Standard								03/30/09 11:42
Phosphorus	8.12	mg/L	0.10	101	90	110			
Sample ID: ICSA	Interference Check Sample A								03/30/09 11:58
Phosphorus	0.0130	mg/L	0.10		-0.1	0.1			
Sample ID: ICSAB	Interference Check Sample AB								03/30/09 12:02
Phosphorus	10.6	mg/L	0.10	106	80	120			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

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QA/QC Summary Report

Client: T-Bone Feeders
Project:

Report Date: 04/07/09
Work Order: B09031661

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: ASA33-8								Batch: 09032601-NNS2	
Sample ID: LCS	Laboratory Control Sample				Run: FIA201-B_090326A			03/26/09 11:08	
Nitrate as N, KCL Extract	8.35	mg/kg	1.0	93	50	150			
Sample ID: MBLK-KCL	Method Blank				Run: FIA201-B_090326A			03/26/09 11:09	
Nitrate as N, KCL Extract	ND	mg/kg	0.1						
Sample ID: B09031304-001BDUP	Sample Duplicate				Run: FIA201-B_090326A			03/26/09 11:12	
Nitrate as N, KCL Extract	4.92	mg/kg-dry	1.0				0.3	30	
Sample ID: B09031304-001BMS	Sample Matrix Spike				Run: FIA201-B_090326A			03/26/09 11:13	
Nitrate as N, KCL Extract	47.0	mg/kg-dry	1.0	102	50	150			

Qualifiers:
RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.4489 * 406.252.6325 * FAX 406.252.6069 * eli@energylab.com

ANALYTICAL SUMMARY REPORT

March 13, 2009

Mitch Macrow
T-Bone Feeders
Box 97
Shepherd, MT 59079

Workorder No.: B09030781

Project Name: Blue Creek Feeders

Energy Laboratories Inc received the following 2 samples for T-Bone Feeders on 3/10/2009 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B09030781-001	Lagoon Liquid	03/10/09 12:00	03/10/09	Sludge	Nitrate as N, KCL Extract
B09030781-002	Lagoon Solid	03/10/09 12:00	03/10/09	Solid	Same As Above

Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: _____

ENERGY LABORAT IES, INC. * 1120 S 27th St * PO Box 30916 * Billings, MT 59107-0916
Toll Free 800.735.44[illegible] * 406.252.6325 * FAX 406.252.6069 * eli@el ylab.com

LABORATORY ANALYTICAL REPORT

Client: T-Bone Feeders
Project: Blue Creek Feeders
Lab ID: B09030781-001
Client Sample ID: Lagoon Liquid

Report Date: 03/13/09
Collection Date: 03/10/09 12:00
DateReceived: 03/10/09
Matrix: Sludge

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
CHEMICAL CHARACTERISTICS							
Nitrate as N, KCL Extract	46	mg/kg		1		ASA33-8	03/11/09 12:15 / srm
- The analysis was performed on an as received moisture basis							

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: T-Bone Feeders
Project: Blue Creek Feeders
Lab ID: B09030781-002
Client Sample ID: Lagoon Solid

Report Date: 03/13/09
Collection Date: 03/10/09 12:00
DateReceived: 03/10/09
Matrix: Solid

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
CHEMICAL CHARACTERISTICS							
Nitrate as N, KCL Extract	291	mg/kg		1		ASA33-8	03/11/09 12:16 / srm

- The analysis was performed on an as received moisture basis

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

T-BONE FEEDERS

ANNUAL BEEF CATTLE 2008

MONTH	IN LOT	IN PASTURE	OUT	OUT PASTURE	DEADS	BALANCE 4749	HDDAYS
January	1165	0	1949	0	7	3958	130918
February	1447	0	695	0	3	4707	118628
March	840	0	2082	0	6	3459	126760
April	1147	301	829	301	4	3773	103722
May	2289	1677	1779	636	12	5312	86176
June	983	0	987	578	6	4724	65696
July	1167	0	1143	0	3	4745	54229
August	1637	461	807	1012	3	5021	72872
September	1902	1649	1113	1649	10	5800	134570
October	448	0	270	316	19	5643	176332
November	833	0	766	0	9	5701	159839
December	1053	0	2057	38	7	4652	158089
TOTAL'S	14911	4088	14477	4530	89	4652	1387831

/366

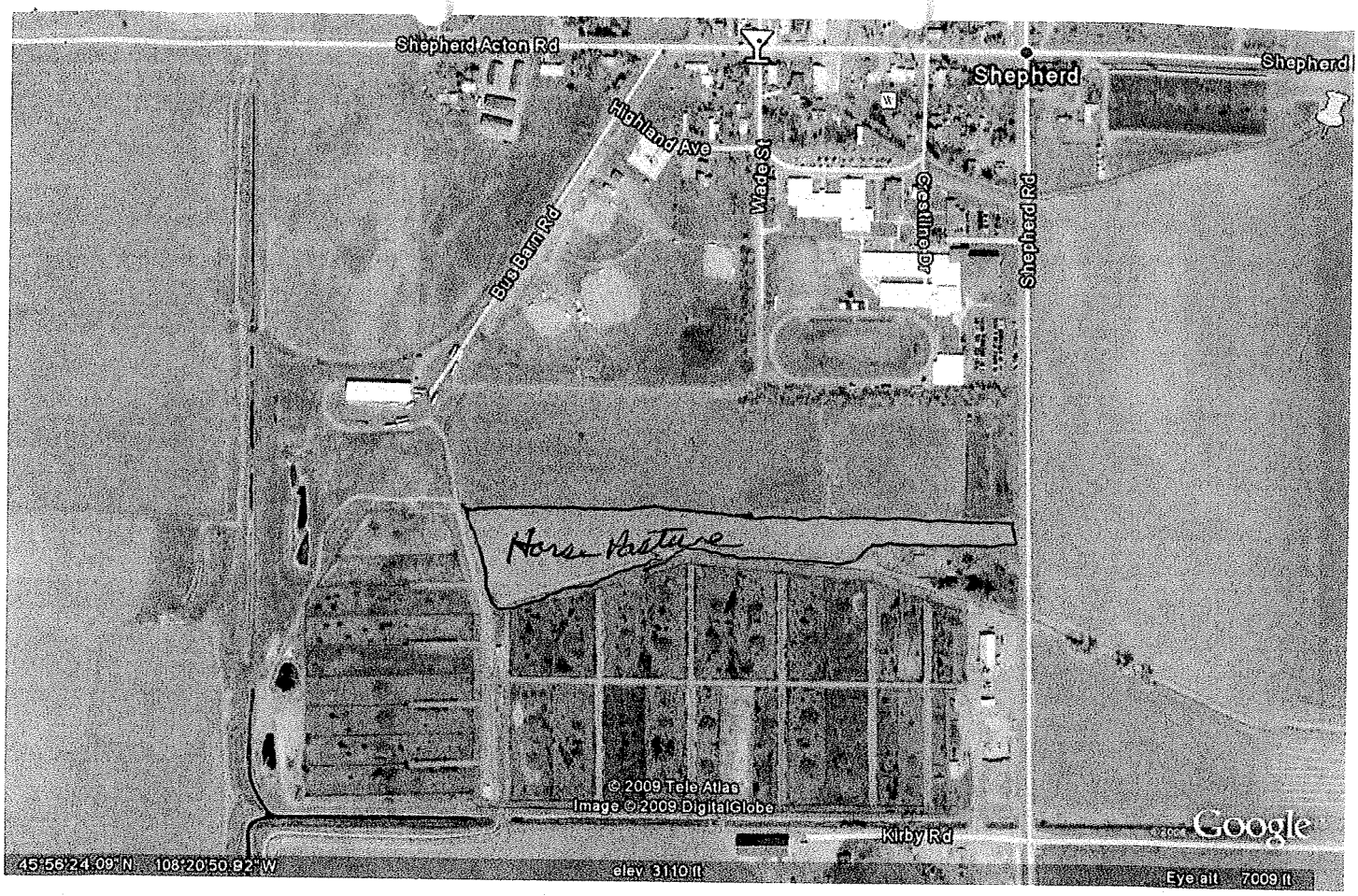
3791.88798

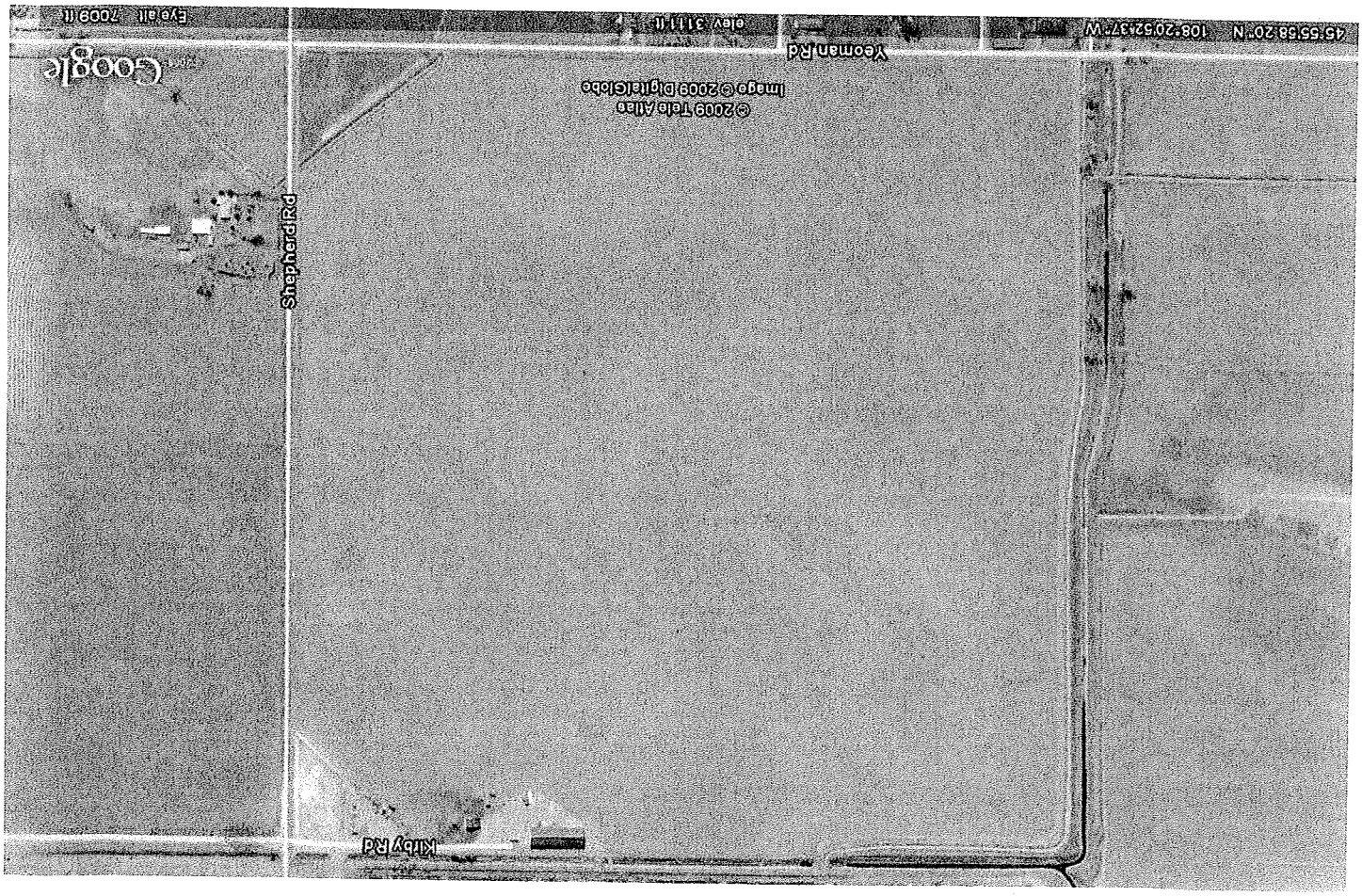
T-BONE FEEDERS

CATTLE MANURE CALCULATION IN LOT

MONTH	HEAD COUNT IN LOT	HEAD DAYS IN LOT	CATTLE WT IN plus CATTLE OUT WT
1/2008	1165	130918	1579924
			1751054
2/2008	1447	118628	970547
			990896
3/2008	840	126760	809722
			1733077
4/2008	1147	103722	867265
			1372370
5/2008	2289	86176	2780155
			633022
6/2008	983	65696	1033028
			838331
7/2008	1167	54229	1004525
			422273
8/2008	1637	72872	957891
			1523028
9/2008	1902	134570	2592017
			1626212
10/2008	448	176332	652703
			180627
11/2008	833	159839	1486197
			211661
12/2008	1053	158089	1202078
	0	0	2362950
	14911	1387831	29581553

29581553# / 14911 HD / 2 = 992 AVG.
1387831 x 40# = 55,513,240 / 2000 = 27,756.62


Shepherd Acton Rd
Shepherd
Shepherd
Highland Ave
Wade St
Cascade Dr
Big Barn Rd
Shepherd Rd
Horse Pasture
© 2009 Tele Atlas
Image © 2009 DigitalGlobe
Kirby Rd
Google
45°56'24.09" N 108°20'50.92" W
elev 3110 ft
Eye alt 7009 ft


Eye alt 7009 ft
elev 3111 ft
Yeoman Rd
45°56'58.20" N 108°20'52.37" W
© 2009 Tele Atlas
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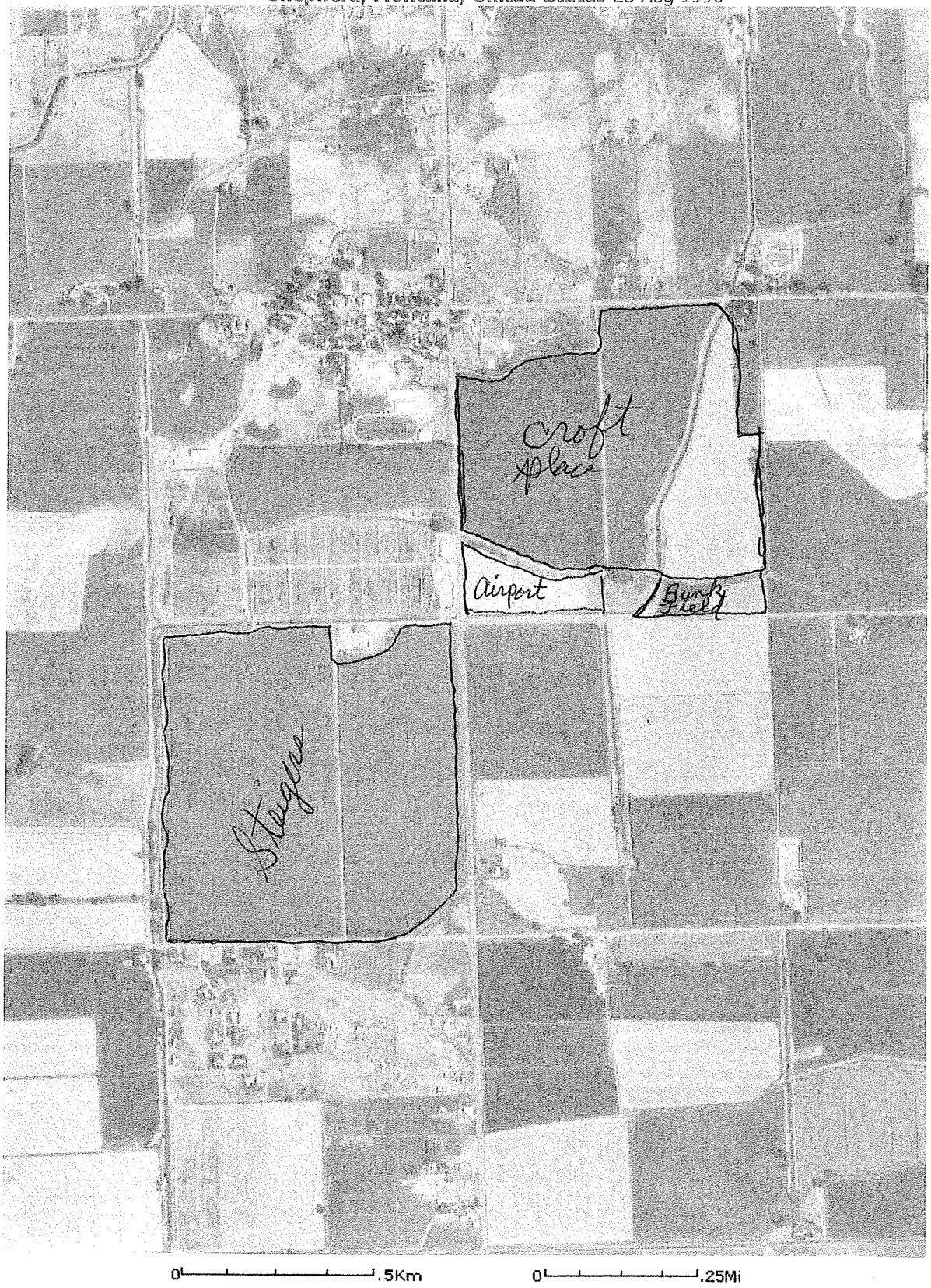
Google
Shepherd Rd
Kirby Rd

USGS Shepherd, Montana, United States 23 Aug 1996



Send To Printer Back To TerraServer Change to 11x17 Print Size Show Grid Lines Change to Landscape

USGS 2 km SE of Shepherd, Montana, United States 23 Aug 1996

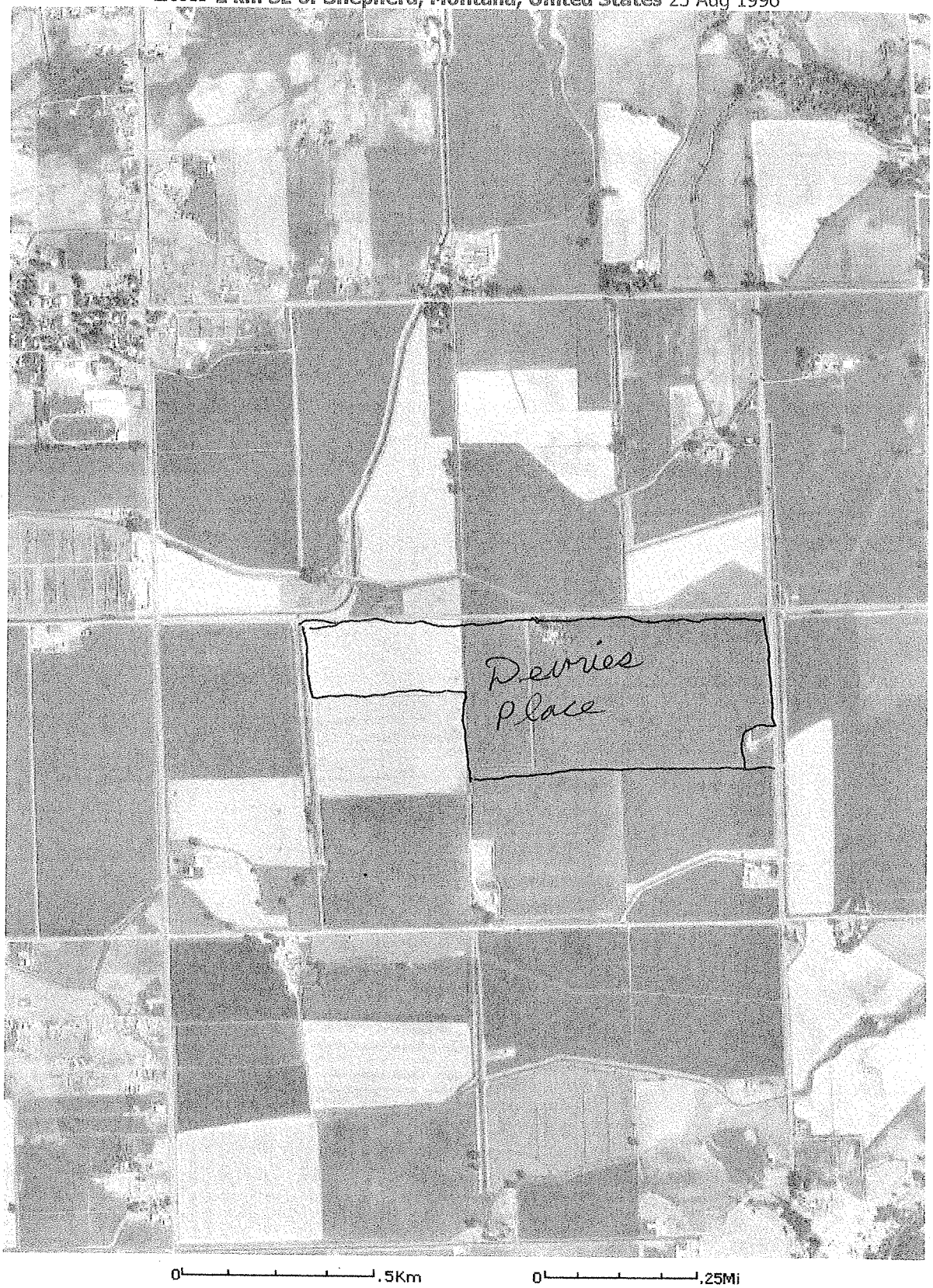
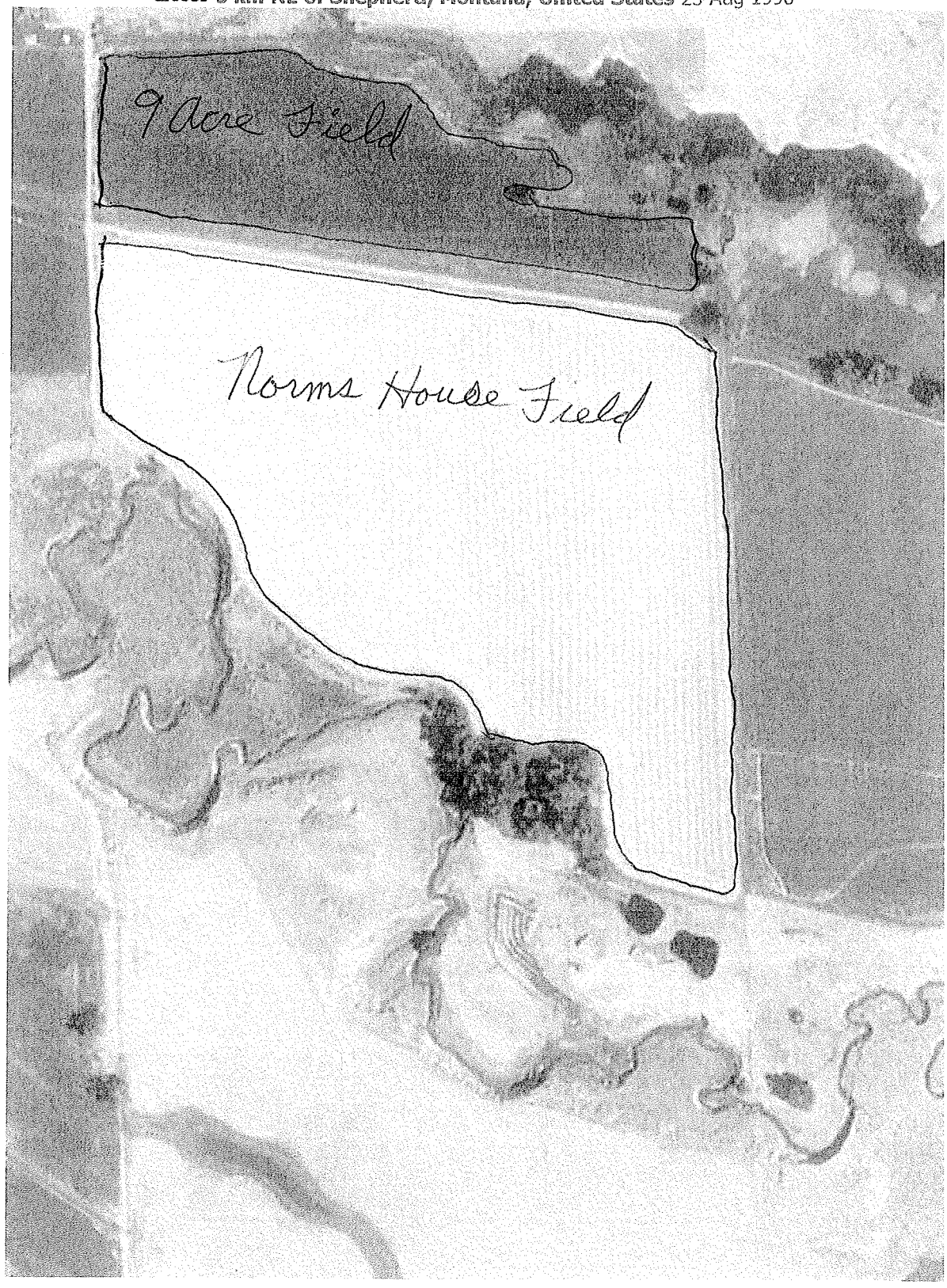
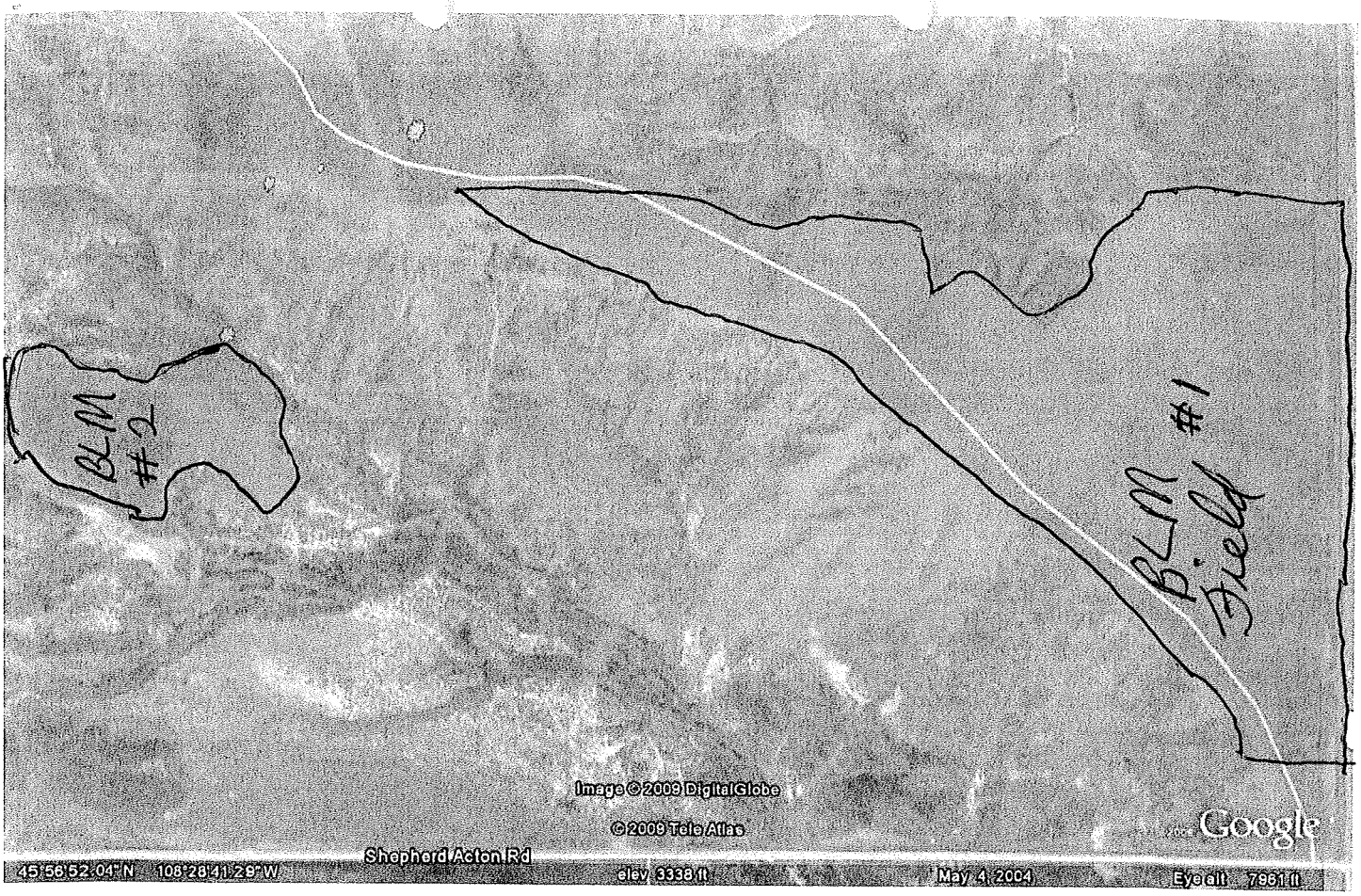
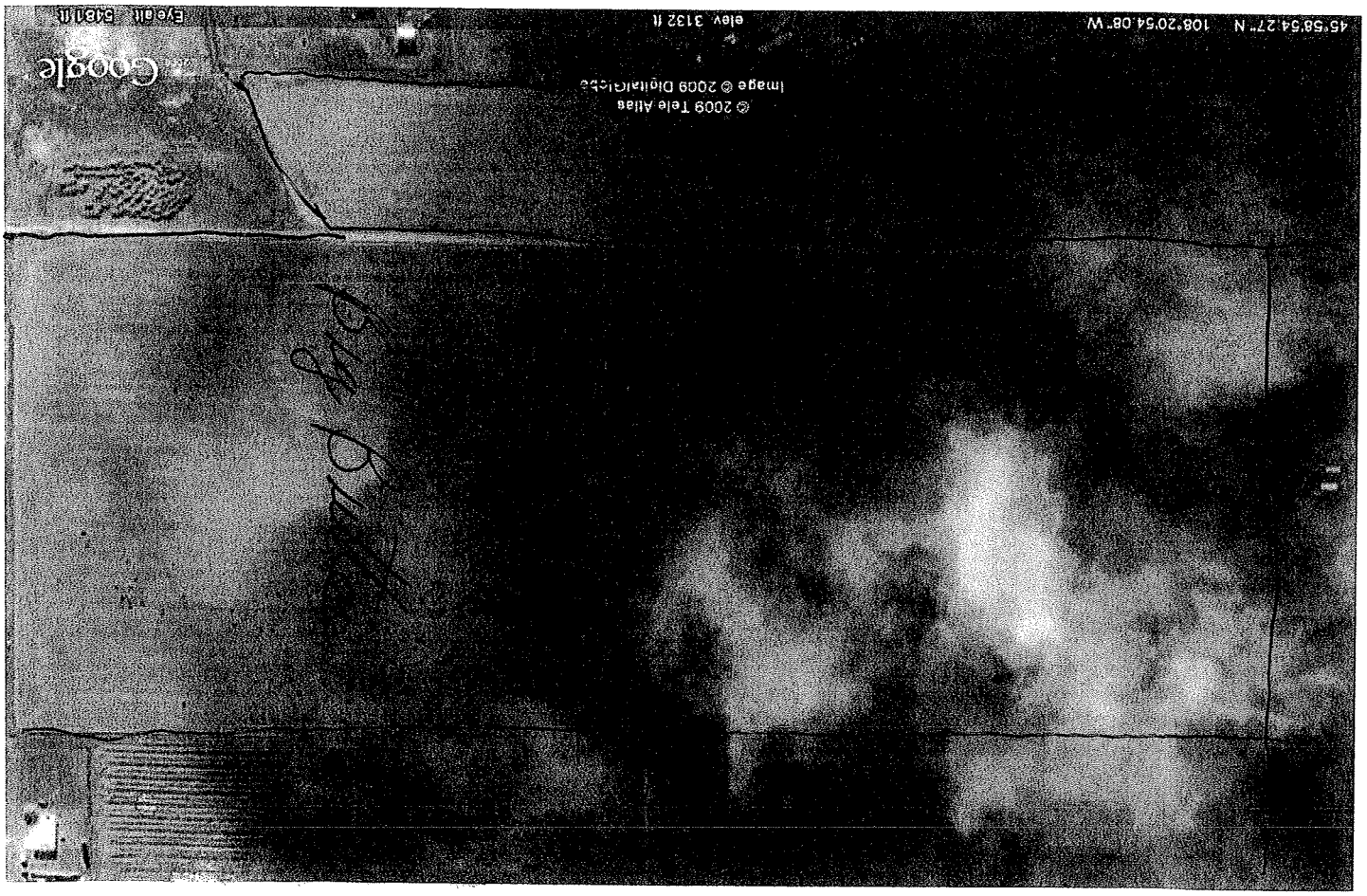


Image courtesy of the U.S. Geological Survey

USGS 3 km NE of Shepherd, Montana, United States 23 Aug 1996




BLM #2
BLM #1 Field
Image © 2009 DigitalGlobe
© 2009 Tele Atlas
Google
45°58'52.04" N 108°28'41.29" W
Shepherd Acton Rd
elev 3338 ft
May 4, 2004
Eye alt 7961 ft


45°58'54.27" N 108°20'54.08" W
elev 3132 ft
Eye alt 5481 ft
Google
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Bird Dog